NSW GOVERNMENT | Office of Water

IPART Submission

Pricing of Water Management Activities and Transaction Consents

- NSW Office of Water

IPART Tamworth Hearing

Core NOW Water Management Activities

Management of State's surface water and groundwater resources (not water delivery or dam operation and maintenance which is State Water):

- Assessment of water available for allocation throughout the year
- Monitoring extractions and quantity and quality of water resources and aquatic health
- Developing and implementing water sharing plans and operational water planning
- Licensing extraction and water supply works and ensuring compliance with licence conditions
- Assessment and approval of water trades and development of supporting procedures and tools
- Representing NSW interests in inter-state and national water agreements

NOW aims to recover the legitimate costs that should be borne by water users consistent with NWI and COAG water reforms for IPART "regulated" activities

NOW Staff and Budget

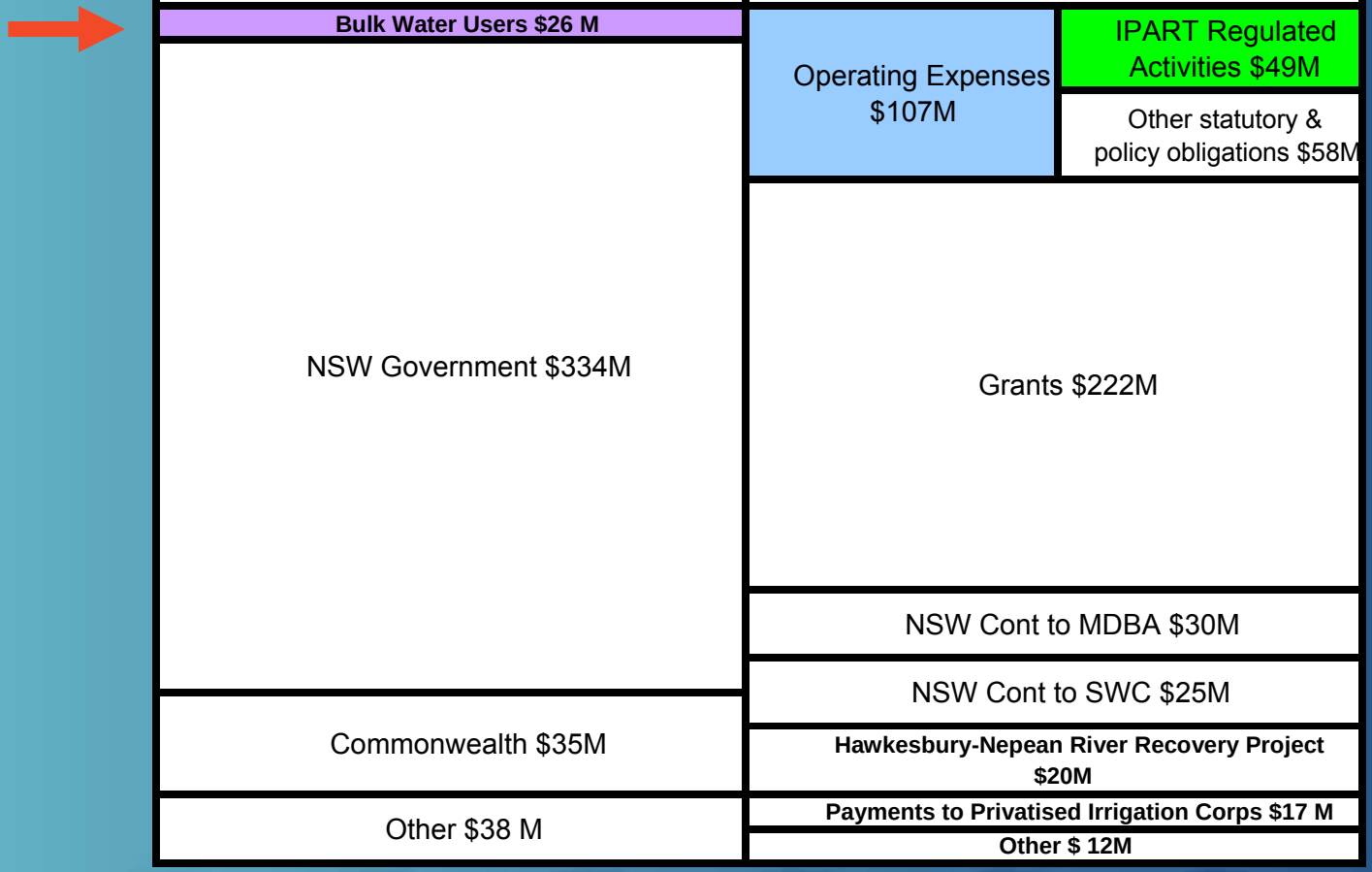
Staff Profile as at October 2009

- Total staff = 619 FTEs
- Staff working on IPART "regulated" activities = 256 FTEs 41%

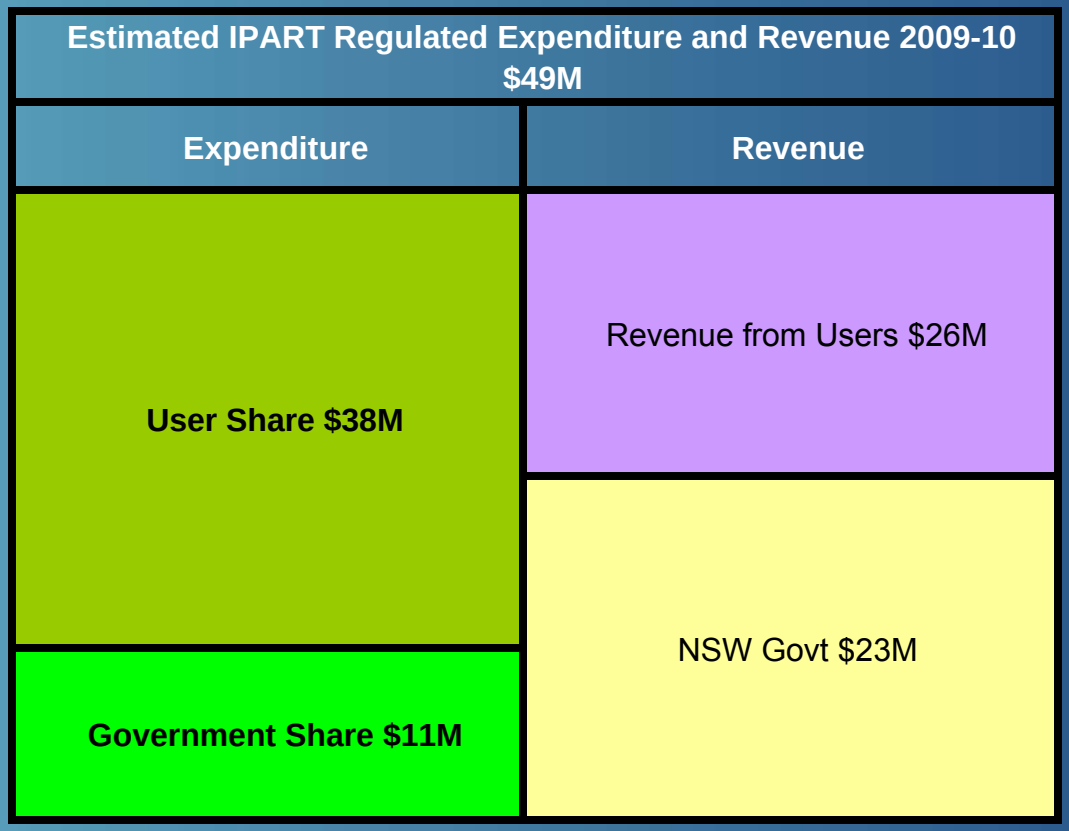
Annual Funding 2009/10

- Total expenses = $433 M
  - **salary & other operating expenses = $107 M**
  - grant and rebate program payments = $326 M
- External revenue = $75 M
- **Estimated revenue from water management charges = $26 M or 24% of NOW's operating expenses**

NOW's Total Budget

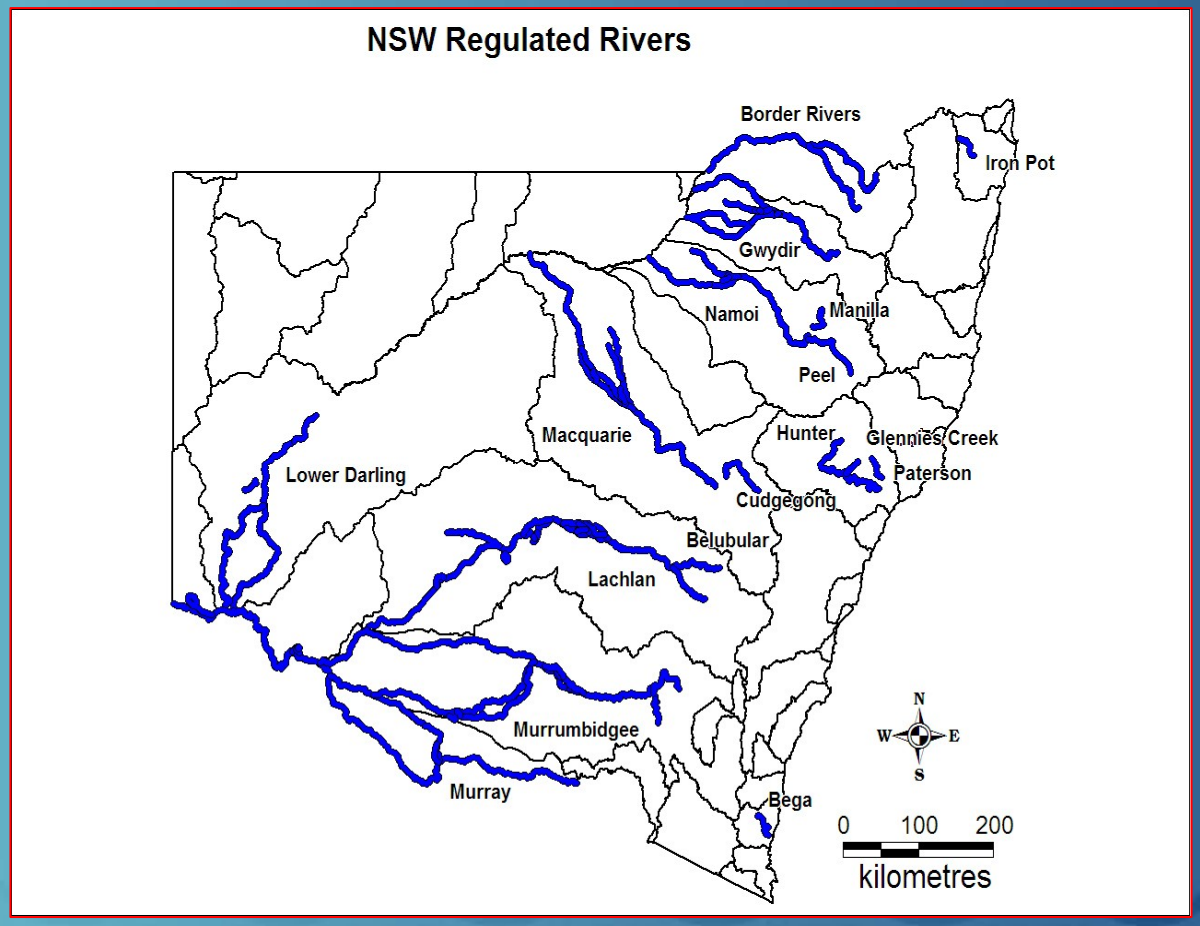


IPART Activities - Government share vs User share



- Shortfall from users of $19.4 M over last 4 years
- IPART projected = around $25 M per year
- Average received = around $20 M per year

Regulated Rivers = flow controlled by major rural storages



Licence types = domestic and stock, major utility and local water utility, high security, general security and supplementary

Total entitlement (incl supplementary water) ≈ 9,000 GLs

Average consumption over last 15 years ≈ 4,300 GLs per year

Unregulated Rivers

- Those without major water storages & associated ordering and delivery systems
- Includes rivers below town water storages as flow is not “regulated” for supply to downstream users.
- Total unregulated river entitlement ≈ 2,800 GLs
- Most unregulated river extraction is not metered so usage charge cannot be applied
- Proposed roll-out of metering program across the Murray Darling Basin

Groundwater

- Most groundwater extracted from inland aquifers for irrigation and town water supply
- Significant stock use from Great Artesian Basin
- Sand beds and fractured rock aquifers also provide smaller supplies
- Total groundwater entitlement ≈ 1,900 GLs
- About half of the total entitlement is metered – but this is mostly in the major inland aquifers
- Rest unmetered – usage charge cannot be applied
- Proposed metering rollout across the MDB

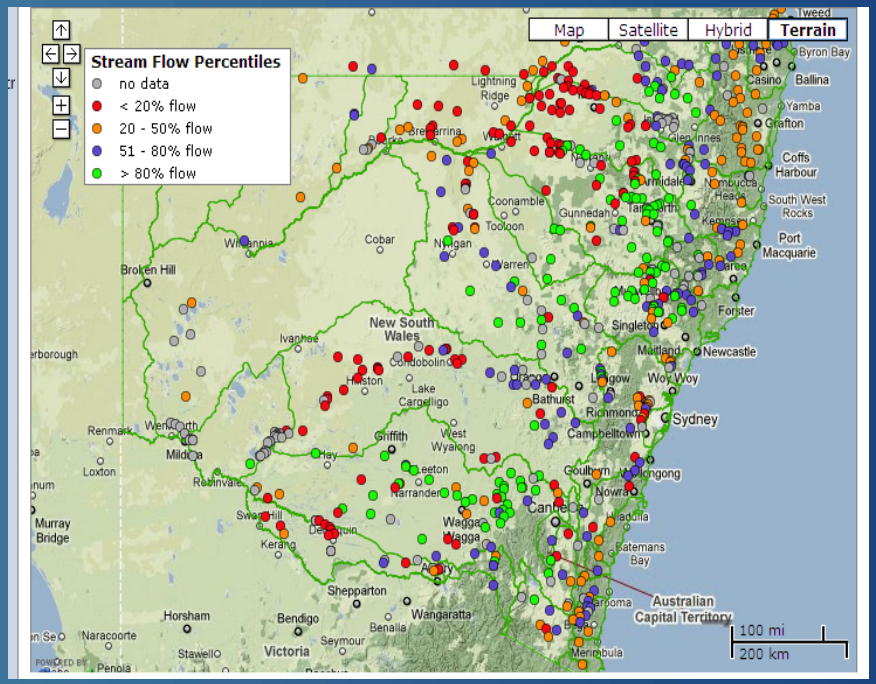
Key Changes since 2006

- Water for the Future
  - Cwth. capital funding for water savings projects in Basin,
  - Expansion of water monitoring & water information across NSW
  - Potentially up to $2 billion investment in water infrastructure across NSW
- Greater Cwth role in Murray Darling Basin
  - *Water Act 2007*
  - MDBA and Basin Plan
  - ACCC water charge, pricing, market & trading rules,
  - Commonwealth Environmental Water Holder
- National standards for water information
- Capital funding tied to NSW operational requirements and achievement of national water reforms and standards

Achievements 2006 to 2010

- Managed water supplies through most critical period of water shortages on record incl. critical water communiques in Lachlan and Macquarie
- Increased real time water data monitoring and availability
- Secured Commonwealth capital funding for expansion of hydrometric and groundwater network monitoring across the State
- Developed a further 15 water sharing plans, including a number of coastal plans on the North and Central Coast, major inland aquifers, GAB, Border Rivers and Peel surface water and groundwater
- Implemented 46 water sharing plans covering 95% of water extraction, incl local groundwater pumping rules in some areas
- Verified, converted and uploaded over 6,000 water licences

Extent of real-time river gauging



Achievements 2006 to 2010 (contd)

- Processed and assessed around 45,000 applications for water licences and approvals
- Upgraded processing times for water trades
- Completed 450 compliance inspections and audits
- Managed flood flows in the Darling River through Menindee Lakes, including to South Australia
- Collected and assessed over 2,000 water quality samples
- Amended legislation to improve compliance capabilities and penalties for illegal extraction/works
- Managed impacts of Commonwealth environmental buyback
- Obtained Commonwealth in-principle approvals for $1.38 billion infrastructure efficiency projects – water savings to offset cuts in extraction limits to be imposed by Basin Plan
- Developed inter-state water trading agreements
- Expanded coverage of groundwater embargoes and access to groundwater trading

Water Sharing Plans – why weren't they completed by 2010?

- DNR required $55 M per year for water management activities. This would have enabled 311 staff and completion of all water sharing plans
- IPART set water management costs at $48 M with a reduced user share at $34 M and NOW only received $20 M per year from users
- As a result staffing of only 256 – short by 55 staff of requirements
- NOW did not have the resources to accelerate the completion of the plans and undertake the associated licensing verification in the period
- Unforeseen events - ongoing extreme drought and Cwth involvement in water management - all required re-direction of resources
- Complexity of some of MDB plan issues:
  - ASGE funding distribution
  - Managing inefficient use of water taken from the GAB
  - Addressing low levels of activation in the Peel
  - Addressing surface and groundwater connectivity in rules
  - Finalisation of inter-state water sharing arrangements on Border Rivers
- Despite this NOW completed major proportion of the plans, covering 95% of water extraction

Operational Water Planning activities to 2010

Between 2006 to 2010 the 5 operational planning staff completed :

- Groundwater trading rules in inland aquifers;
- Groundwater embargoes across MDB aquifers and alluvial coastal aquifers;
- Controlled allocation strategy for savings under Cap and Pipe the Bores Program;
- Rules for access to sugar cane drains; tidal pools; replacement groundwater bore works; & daily access conditions for highly connected surface/groundwater systems and in-river pools.

Work was advanced significantly on:

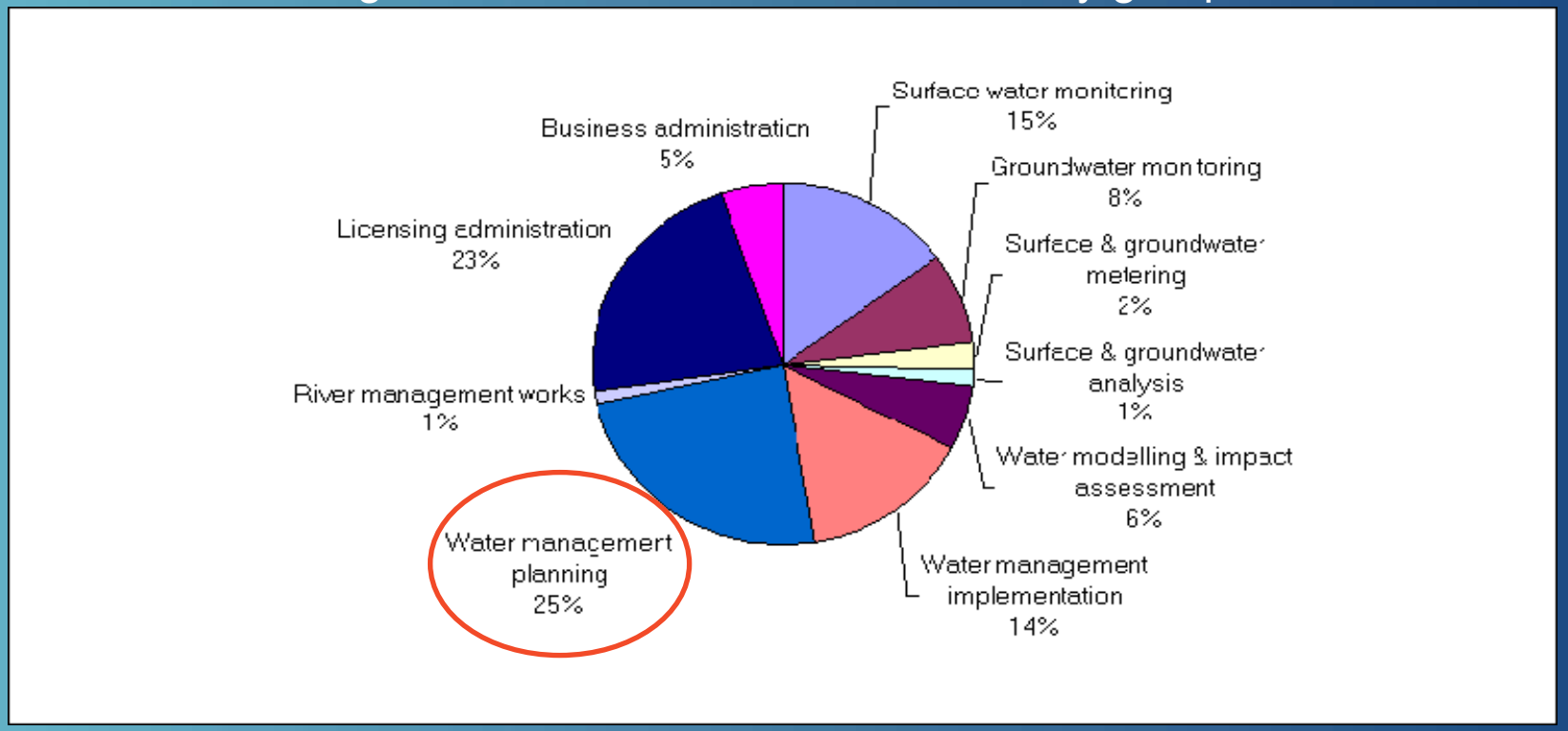
- Public exhibition of rules for licensing floodplain harvesting;
- Preparation of mandatory guidelines for take of water under basic landholder rights;
- Guidelines for licensing aquifer interference activities;
- Rules for the management of stacked aquifers;
- Return flow rules
- Licensing for stormwater harvesting projects;
- Setting long-term annual average extraction limits and managing compliance for unregulated and groundwater systems in MDB.

Key points of NOW's submission for next pricing determination to 2012/13

- Allocation of costs based on specific activity drivers
- Additional staff required to meet core activities and requirements of Commonwealth *Water Act 2007* and Murray Darling Basin Reform IGA 2008
- Increased focus of MDBA on water management
- 3 year determination from 2010/11 to 2012/13
- 100% recovery of users share of water management costs
- Changed tariff structure:
  - 100% fixed costs; or
  - If not fixed for regulated rivers – 70:30 fixed: usage charges
  - 15 year rolling average for regulated river usage charge
  - If variable charge is determined by IPART, NOW will need a volatility allowance as per State Water
- Only 2 regions for groundwater pricing
- Rate of return on assets included
- Metering service charge – supplementary submission

Main Activity Areas 2010/11 to 2012/13

- Water management costs attributed to 11 activity groups:



- Major area is water management planning to complete the water sharing plans
- Split into user : Government shares with average split of 2/3:1/3 and after price path 50:50
- Allocated between water source type & area based on range of drivers e.g. no. of gauging/sampling sites, operational /water sharing plan complexity, entitlement - not on staff location as no longer on a regional basis

Proposed Cost Recovery from 2010/11 – 2012/13 for Core Activities

NOW Staff and Operating Cost Increases				
	2009/10	2010/11	2011/12	2012/13
STAFFING				
Direct Staff Base (FTE)	256	256	256	256
Additional FTE		11	17.5	19
Cumulative increase		11	28.5	47.5
Annual Increase %		4.3%	6.6%	6.7%
EXPENDITURE	2006 Det	2009 Request		
IPART Regulated Operating Costs $M	45.9	50.1	53.9	56.8
Annual Increase %		9.1%	7.5%	5.4%

Delivery of Core Activities (dependent on additional 47 FTEs) by 2012/13 :

- Support expanded hydrometric and water data networks – required to meet conditions of Cwth capital funding
- Complete 38 water sharing plans and convert licences
- Inland water sharing plans before Basin Plan commences to set benchmark for new Sustainable Diversion Limits
- Implement rules for 84 water sharing plans across NSW
- Commence review of 31 first round water sharing plans
- Additional surface water quality monitoring and analysis
- Monitor and evaluate the ecological and socio-economic performance of water sharing plans
- Provide additional licensing and compliance officers
- Key operational planning initiatives – floodplain harvesting, reasonable use guidelines, aquifer interference, return flows

Additional Staff Required for Commonwealth Reform Activities = 57 FTEs

- July 2008 IGA on Murray Darling Basin Reforms – includes principle of no net cost to states of implementing Basin Plan and Cwth Water Act 2007
- Costs estimated at around $10 M per year
- Cwth has since advised that:
  - application of this principle will be limited
  - most activities Cwth believes relate to implementation of national water reforms (not covered by no net costs)
- States will need to undertake activities, provide proof of expenditure then seek reimbursement from Cwth
- This expenditure includes costs of re-making NSW plans to obtain accreditation under the Basin Plan which will be a significant exercise, transformation of licences to meet ACCC rules, additional gauging site visits

MDBA Costs

- Significant increase from previous determination of user share from $1.7 to $6.5 M
- Results from a shift of MDBC's focus on river operations to MDBA's broader water management activities
- Distributed amongst water source and regions on the basis of water type and extraction related entitlement
- Jurisdictional contributions set to 2010/11
- Annual budget proposed by MDBA and reviewed by contributing jurisdictions – NSW, Vic, Qld, SA, ACT and Cwlth
- NOW has sought a strategic review of jointly funded program areas from 2010/11, will be carried out this financial year and overseen by the Basin Officials Committee
- Review of Murray Darling Basin Agreement underway

Determination Period

New prices should start in January 2011. Reasons for determination to 2012/13:

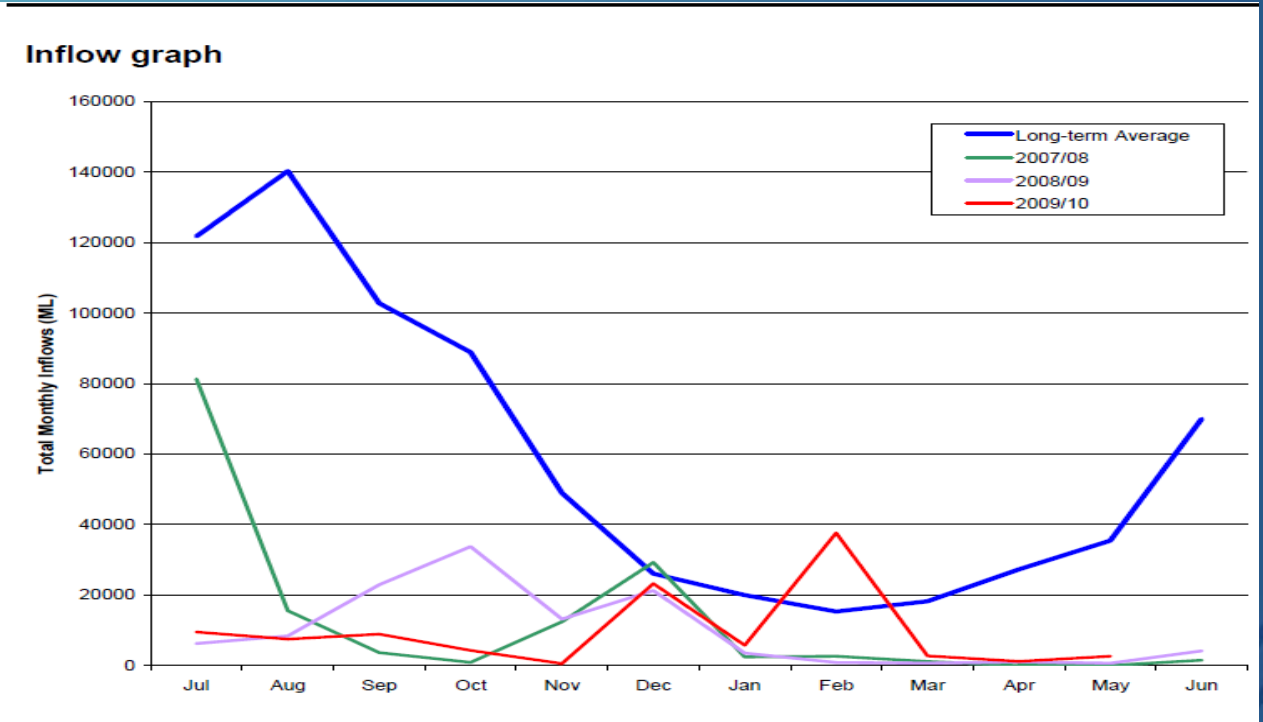
- Uncertainty over level of extraction limit cuts to be imposed by Basin Plan, transitional arrangements and extra monitoring and compliance
- Draft Basin Plan already delayed from June to November 2010 by MDBA - potential delay in final Basin Plan
- Timing and role of ACCC in water pricing has not been determined
- Review of MDBA costs complete
- Position of Cwlth funding of no net costs
- Confirmation not until October 2010 whether Cwth funding of state priority projects will proceed – Healthy Floodplains, Metering and Basin Pipe
- State Priority Projects will have implications for operation and maintenance costs e.g. Metering Service Charge

100% Recovery of Users' Share of Water Management Costs and Fixed Charge

- High degree of under-recovery in current charges
- Most submissions seek valley or specific water source pricing, others want "postage stamp" pricing
- Water management costs increase in dry periods e.g. Critical Water Advisory Groups, Communiqués, increased review of water availability and allocations, town water restrictions, additional monitoring and modeling, specific drought management strategies
- NWI requires consumption based pricing for water storage and delivery, while for planning and management activities charges should be linked to actual costs
- Absence of broad-scale metering in unregulated rivers and groundwater means reliable usage data is limited
- Water trading provides the main incentive for water use efficiency
- If IPART to continue with fixed: variable regime – will need volatility allowance to counter impacts of dry years

Consumption Forecast - Rolling 15 year average for regulated river usage charge

- Graph below of inflows into Wyangala Dam shows last few years water availability well below long term average in the Lachlan
- Last 15 year data can be more accurately identified and verified, account for possible climate change and variability
- Ensure usage charges more accurately reflect costs in the period



Two Pricing Regions for Groundwater

- Coastal and inland pricing regions
- Groundwater aquifers overlap river valley catchments
- Aquifer boundaries are unclear
- Aquifers can be stacked in 3-D – shallow & deeper aquifers
- 167 Groundwater Management Areas in NSW
- Not possible or practical to assess costs on an individual GMA basis – NOW operates on a state not regional basis

Rate of Return on Assets

- IPART's pricing framework provides for a rate of return on assets.
- For NOW rate of return on assets is only a small component.
- NOW needs a return of assets to funds its asset replacement program - the depreciation charge
- The return on assets covers the opportunity costs, that is the interest it could otherwise earn on the funds invested

Business	% of revenue needs attributed to depreciation + return
State Water	60%
Hunter Water	64%
Sydney Catchment Authority	58%
Gosford City Council	49%
Wyong Shire Council	45%
NOW	**4%**

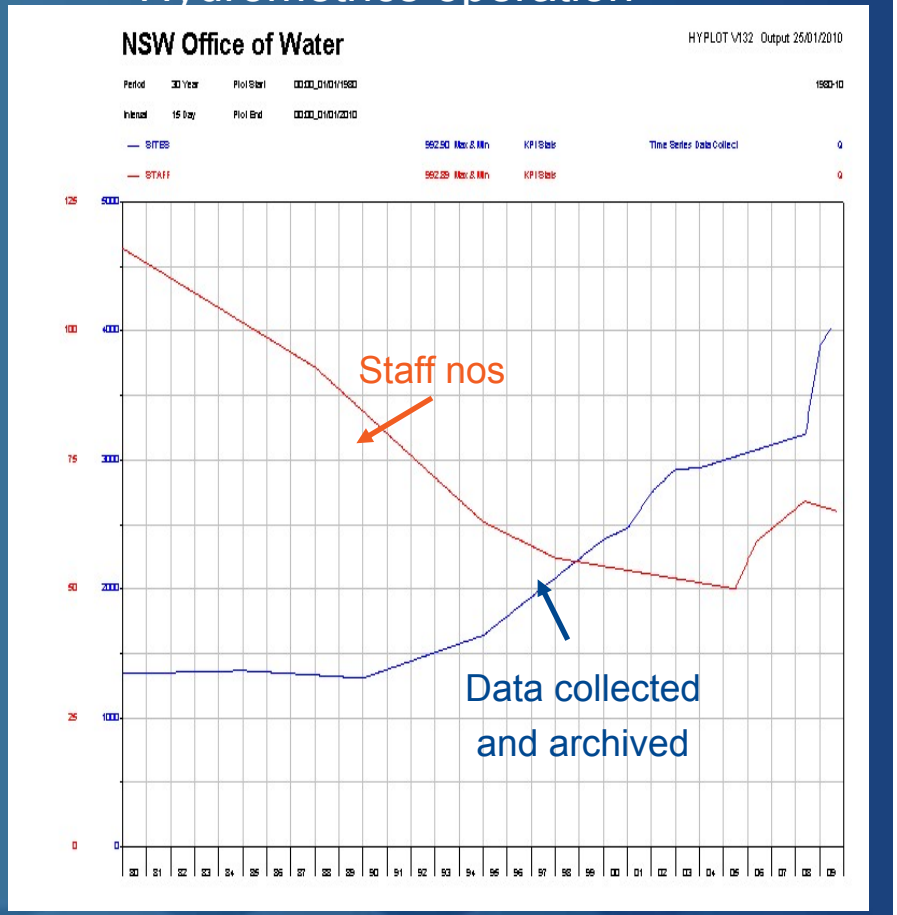
Minimum Bills and Removal of Cap on Bills

- More than 50% of customers currently paying the minimum bill of $60
  - Regulated Rivers = approx 5,000
  - Unregulated Rivers = 2,750
  - Groundwater = 1,700
- $60 doesn't cover NOW's billing administration costs , nor water management costs
- Many submissions seeking $200 minimum bill. If this was set, 65% of users would be on minimum bill and $ per ML rate would decrease.
- On a cost recovery basis NOW would support $200 minimum bill
- Issue is impact on small users
- Cap on bills difficult to administer and interpret

Efficiencies in Operations

- Change from regional to State operation with reduction in staff in 2006/07
- Treasury imposes efficiencies through funding cuts of $1 M p.a.
- NOW prepares business cases for new activities e.g. expansion of the hydrometrics network
- NOW meets the benchmark for overheads as a proportion of direct costs of 12%
- Already achieved demonstrated efficiencies in hydrometrics – see graph
- Real time data improves access to data, but national standards require increased site visits
- PwC/Halcrow identified NOW more cost efficient in consent transactions than other equivalent organisations
- Water trading times against national targets published on web

Hydrometrics operation



1980 → 2009

NOW's current staffing levels

NOW has only:

- 21 hydrometrics staff managing 814 river gauging stations and covering more than 1 million square kms
  - Equates to 39 stations and 47,000 km2 per staff member
- 18 water planners to develop 38 more water sharing plans
  - Equates to less than half a planner per water sharing plan
- 11 staff to implement 47 water sharing plans
  - Equates to less than ¼ of a person per plan
- 10 compliance officers
  - Equates to one officer per 100,000 km2

Metering Service Charge for next 3 years

- Applies to those areas metered under the Cwth funded program
- If capital funding not provided by Cwlth, licence holders will have to pay for new meters to meet national meter standards
- Charges apply to those with a meter, small users not metered
- Cwth will pay for capital cost of installation, but NOW will undertake operation and maintenance of meters

- Audits of meters show under-recording up to 20%
- Warranty does not cover operational or maintenance cost unrelated to faulty meter
- Charge proposed is $379 per meter per year
- In areas where there are meters and these costs are in the water management costs for the area – metering charge will be $33 per meter

Water Consent Transactions

- Significant under-recovery of transaction costs
- Some applications take many weeks to assess and approve
- Proposed charges to better reflect cost of processing
- Assessment of temporary dealings for unregulated rivers and groundwater much more extensive than routine approach required for regulated river temporary trades

Drivers of Proposed Price Increases

1. 100% cost recovery. Prices set in last determination at below full cost recovery :

Regulated water sources	93%
Unregulated water sources	88%
Groundwater	75%

2. Higher proportion of user share activities: increased from 67% to 77% since last determination
3. Increase in water management user share of MDBA activities from 5 to 20%
4. Increase in the return on and of assets from $0.84 to $4.2 M
5. More robust cost allocation method has changed prices at the valley level to minimise cross-subsidisation

Analysis of Current Prices

ANALYSIS OF TYPICAL BILL SIZE			
	Regulated	Unregulated	Ground Water
Average	$813	$524	$568
Median	$60	$117	$165
Maximum	$1,232,083	$1,540,297	$36,991
Total Licences	9,833	11,851	9,453
Bills < $500	8,219	10,494	7,138
% Bills < $500	84%	89%	76%
Bills < $1000	8,999	11,258	8,151
% Bills < $1000	92%	95%	86%

Doubling of current bills would still have median bills at below $300.